



RCRA Closure Sites Fact Sheet

January 1999

A fact sheet providing information about Site S-8 and Site E-3

The purpose of this fact sheet is to describe the closure processes pertaining to Sites S-8 and E-3, which are being recommended for closure under the Resource Conservation and Recovery Act (RCRA). The portion of the sites being recommended for closure only pertains to soil contamination.

Site S-8

The S-8 spill area is located on the eastern border of the base, between Bldg. 329 and the base boundary, near the intersection of Berman Road and Tinker Drive and adjacent to the Union Pacific railyard. Four underground tanks were originally installed at the site in 1941 to store petroleum products.

In the mid-1950s, an Aircraft Engine Parts Cleaning Facility (AEPCF) was built on the site and four additional underground tanks were installed. The cleaning facility utilized chlorinated solvents in their processes.

The facility was dismantled in 1982 and all eight buried tanks were removed. Soil contamination was not completely removed during tank removal, prompting the Texas Natural Resource Conservation Commission (TNRCC) to regulate the site as a landfill.

Cleaning activities associated with the AEPCF resulted in chlorinated solvent contamination due to leaking industrial wastewater collection system lines. Additional soil contamination was caused by JP-4 fuel that leaked from various tanks.

In 1989, a Resource Conservation and Recovery Act (RCRA) post-closure care permit application was filed with the TNRCC (formerly known as the Texas Water Commission). The TNRCC issued a permit on June 12, 1998 requiring submittal of a Closure Plan for Site S-8.

The Remedial Investigation found organic and inorganic contamination in the soil and groundwater. Metals such as beryllium, chromium, cadmium, lead, nickel and thallium were detected at concentrations greater than regulatory requirements.

Construction of an interim remediation system to prevent further migration of contaminants off the base began in July 1991, and the system went into operation in February 1992.

The majority of the contaminants in the soil are chlorinated solvents. The volume of contaminated soil is estimated at 11,000 cubic yards. The Closure Plan includes removal of the contaminants using soil venting and use of institutional controls to restrict access to the site. Exposure to soils at the site does not pose a health risk. These measures are intended to reduce human exposure to the contaminated soil as well as prevent contamination from reaching the groundwater.

The proposed closure remediation is designed to meet several objectives:

- Protect human health and the environment, including minimization or elimination of post closure escape of hazardous constituents to ground or surface water or to the atmosphere
- Minimize or eliminate of the need for post closure care, engineering or institutional controls after the completion of remedial activities
- Comply with applicable closure requirements
- Remove organic constituents in the soil that exceed regulatory requirements
- Evaluate the levels of inorganic constituents of concern in the soil to ensure they meet regulatory requirements.

Kelly AFB will perform, at minimum, the following remediation processes:

- Environmental sampling

- Chemical analyses
- Installation of bioventing systems
- Backfilling and covering
- Operation and maintenance of bioventing systems
- Transport and disposal of contaminated material
- Closure certification and preparation of deed certifications

The Closure Plan proposes to meet TNRCC's Risk Reduction Standard 2 for closure of Site S-8. Once TNRCC gives final approval of the closure plan, the scheduled completion for proposed closure activities is two-and-a-half years.

Site E-3

The E-3 chemical evaporation pit is located south of Military Drive and east of the jet engine test cells. It was used from 1969 to 1980 to evaporate solvents and dispose of sludges, insecticides, spent solvents and residue from tank-cleaning operations.

The pit covered approximately 1/3 of an acre.

In 1985, all liquids, oil, sludge, the clay liner and visibly contaminated soil were removed; however, subsurface soil and groundwater contamination remain.

The remedial investigation found significant contamination in the soil and groundwater. The levels of contaminants remaining were deemed high enough to impact groundwater above health based levels. The levels of contaminants found were higher than those authorized by Texas Natural Resource Conservation Commission's Risk Reduction Standard 2 (TNRCC RRS2) criteria.

Contaminants included sludge, solvents, PCBs, heavy metals, cresols, contaminated fuels and oils, pesticides, insecticides and herbicides.

In 1989, a Resource Conservation and Recovery Act (RCRA) post-closure care permit application was filed with the TNRCC (formerly known as the Texas Water Commission). The TNRCC issued a permit on June 12, 1998 requiring submittal of a Closure Plan for Site-3.

The Closure Plan addresses closure only of areas within Site E-3 with soil contamination. RCRA quarterly monitoring has been conducted at the site since 1989. Groundwater monitoring will continue at the site as noted in the compliance plan.

The Closure Plan for Site E-3 contaminated soils proposes:

- Collect additional samples to complete detailed site characterization, evaluate inorganic extent and leachability, identify areas of high contamination concentration and confirm final layout and design
- Design and install bioventing and Soil Vapor Extraction (SVE) systems at Site E-3, including the installation of vent wells, associated piping and equipment to enhance the natural breakdown of organic compounds in the soil
- Properly manage the disposal of all soil and other incidental waste produced as a result of closure activities
- Decontaminate all equipment used in the installation of the bioventing and SVE systems
- Establish baseline conditions for soil and soil gas to determine progress
- Monitor performance of the systems monthly for the first six months, then determine how often monitoring will be necessary
- Evaluate groundwater monitoring data to determine the effect of the systems on groundwater
- Collect samples to verify that soil has reached closure criteria
- Decontaminate and dispose of all remediation equipment
- Properly dispose of all post closure activity soil
- Comply with post-closure care requirements



Site E-3